Lösung A1

$f_1(x) = 3 \cdot e^x$	$f_1'(x) = 3 \cdot e^x$
$f_2(x) = \frac{1}{2} \cdot e^x$	$f_2'(x) = \frac{1}{2} \cdot e^x$
$f_3(x) = 3 \cdot e^{2x}$	$f_3'(x) = 6 \cdot e^{2x}$
$f_4(x) = e^{0,5x} \cdot 2$	$f_4'(x) = e^{0,5x}$
$f_5(x) = a \cdot e^{\frac{1}{a} \cdot x}$	$f_5'(x) = e^{\frac{1}{a}x}$
$f_6(t) = \frac{1}{b} \cdot e^t$	$f_6'(t) = \frac{1}{b} \cdot e^t$
$f_7(t) = a^2 \cdot e^{\sqrt{2}t}$	$f_7'(t) = a^2\sqrt{2} \cdot e^{\sqrt{2}t}$

Lösung A2

$f_1(x) = (4-x)(e^{3x}-2)$	$f_1'(x) = (11-3x) \cdot e^{3x} + 2$
$f_2(x) = (3-2x^2)\left(\frac{1}{2}e^x + 3x\right)$	$f_2'(x) = -4x\left(\frac{1}{2}e^x + 3x\right) + \left(\frac{1}{2}e^x + 3\right) \cdot (3-2x^2)$
$f_3(x) = (x^{2a}-b)(e^{2ax}-c)$	$f_3'(x) = 2a \cdot x^{2a-1} \cdot (e^{2ax}-c) + 2ae^{2ax} \cdot (x^{2a}-b)$
$f_4(x) = e^x \cdot (-4x^2+3)$	$f_4'(x) = -8x \cdot e^x - 4x^2 \cdot e^x + 3e^x = -e^x \cdot (4x^2+8x-3)$
$f_5(x) = 3e^{2x} \cdot (1-e^x)$	$f_5'(x) = 6e^{2x} - 9e^{3x} = 3e^{2x}(2-3e^x)$
$f_6(t) = (t+1) \cdot (t-1) \cdot e^{2t}$	$f_6'(t) = 2t \cdot e^{2t} + 2e^{2t} \cdot (t^2-1) - 2e^{2t} = 2e^{2t}(t^2+t-1)$
$f_7(t) = e^{3t} + e^{2t} - e^t$	$f_7'(t) = 3e^{3t} + 2e^{2t} - e^t = e^t \cdot (3e^{2t} - 2e^t - 1)$

Lösung A3

$f_1(x) = (12e-5)(1-3e^x)$	$f_1'(x) = -3e^x(12e-5)$
$f_2(x) = (2e^x+1)(3e^x+1)$	$\cancel{f_2'(x) = 12e^{2x-1}}$ $f_2'(x) = 12e^{2x} + 5e^x$
$f_3(x) = e^{4x} \cdot (3e^x+10)$	$\cancel{f_3'(x) = 5e^{4x} \cdot (3e^{2x}+8)}$ $f_3'(x) = 5e^{4x} \cdot (3e^x+8)$
$f_4(x) = 0,5e^x \cdot (2e-4e^2)$	$f_4'(x) = 0,5e^x \cdot (2e-4e^2)$
$f_5(x) = 4e^{2x+5}$	$\cancel{f_5'(x) = 8e^{2x+4}}$ $f_5'(x) = 8e^{2x+5}$
$f_6(t) = (5x^3-2x) \cdot e^{-x}$	$f_6'(t) = -e^{-x} \cdot (5x^3 - 15x^2 - 2x + 2)$